



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,357	12/15/2003	Gisbert Michels	PO-7885/LeA 36,413	4084
34947	7590	03/22/2005	EXAMINER	
LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112			ASINOVSKY, OLGA	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,357

Applicant(s)

MICHELS ET AL.

Examiner

Olga Asinovsky

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/15/03&6/21/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimokawa et al U.S. Patent 4,314,041 in view of Shimokawa et al U.S. Patent 4,268,638.

Shimokawa 041 discloses rubber-modified thermoplastic resin comprising a grafting a vinyl monomer mixture comprising of an aromatic alkenyl compound and a polar vinyl compound onto an ethylene-propylene-non-conjugated diene copolymer rubber, column 3, lines 12-35. The polymerization process is a continuous solution polymerization for producing the AES resin, column 3, lines 21-30 and 42-61, for the present claim 6. The rubber EPDM particles are dispersed having size of 0.3 to 0.7 microns, for the present claim 1, column 4, line 2 and 35. The EPDM rubber is readable in the present claims, and a Tg of said rubber is expected being less than -50C, for the present claim 1. The polymerization process comprises the polymerization conversion in the first polymerizer of from 40 to 80 % of the monomers and the grafting degree preferably to 30 % by weight, column 5, lines 65-68 and column 6, line 1. Then, the polymerization is completed with the final polymerization conversion of at least 85%, column 6, lines 24-

Art Unit: 1711

26, for the present claim 6. None of these references discloses the presence of a molecular weight regulator, for the present claim 6.

Shimokawa'041 does not disclose the gel value specified in the present claim 1 as the ratio of the gel value measured in THF (tetrahydrofurane) to the gel value measured in acetone being less than 0.1. This is a low gel content.

Shimokawa'638 discloses substantially the same resulting rubber-modified thermoplastic resin to the invention of Shimokawa'041. Shimokawa'638 discloses a low gelation degree of not more than 5%, column 3, lines 7.

Regarding to the teachings of Shimokawa'638, it would have been obvious to one of ordinary skill in the art to consider that Shimokawa'041 also discloses a low gelation degree since both Shimokawa references disclose the analogous composition and a process for making said composition, thus the low gelation degree is reasonably expected in Shimokawa'041.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimokawa et al U.S. Patent 4,314,041 in view of Shimokawa et al U.S. Patent 4,268,638 as applied to claims 1-7 and 9-10 above, and further in view of Ishida et al U.S. Patent 5,306,778.

Shimokawa'041 and Shimokawa'638 do not disclose using the rubber-modified thermoplastic resin with other thermoplastic resin specified in the present claim 8.

Ishida discloses a blend of rubber-modified thermoplastic resin with polyester and/or polyurethane, column 10, lines 63-68.

Art Unit: 1711

It would have been obvious to one of ordinary skill in the art to use the rubber-modified thermoplastic resin in each Shimokawa's invention with other thermoplastic resin as disclosed by Ishida as being a benefit to improve properties of the selected other thermoplastic resin for molding articles.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The applicants' references have been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky
Examiner
Art Unit 1711

OA
March 17, 2005



James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700